

Alaska Trollers Association  
 American Rivers  
 Antioch Living Systems Collective  
 Association of Northwest Steelheaders  
 Boulder-White Clouds Council  
 Clearwater Forest Watch  
 Coalition for Salmon and Steelhead Habitat  
 Coast Range Association  
 Defenders of Wildlife  
 Earth Justice Legal Defense Fund  
 Federation of Fly Fishers  
 Friends of the Earth  
 Idaho Conservation League  
 Idaho Rivers United  
 Idaho Steelhead and Salmon Unlimited  
 Idaho Wildlife Federation  
 Institute for Fisheries Resources  
 Izaak Walton League-Greater Seattle Chapter  
 Lands Council  
 Long Live the Kings  
 The Mountaineers  
 Natural Resources Defense Council  
 North Cascades Conservation Council  
 Northwest Ecosystem Alliance  
 Northwest Environmental Defense Center  
 Northwest Resource Information Center  
 Northwest Sportfishing Industry Association  
 NW Energy Coalition  
 Oregon Natural Desert Association  
 Oregon Natural Resources Council  
 Oregon Outdoors Association  
 Oregon Trout  
 Oregon Wildlife Federation  
 Pacific Coast Federation of Fishermen's Associations  
 Pacific Marine Conservation Council  
 Puget Sound Gillnetters Association  
 Purse Seine Vessel Owner's Association  
 River Network  
 Rivers Council of Washington  
 Salmon For All, Inc.  
 Salmon For Washington  
 Sawtooth Wildlife Council  
 Sierra Club  
 The Wilderness Society  
 Trout Unlimited  
 Washington Kayak Club  
 Washington Trollers Association  
 Washington Wilderness Coalition  
 Water Watch of Oregon  
 Wild Angels  
 Willamette Riverkeeper

# SAVE OUR *wild* SALMON

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Donna Darm.  
 Acting Regional Administrator  
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 Northwest Region  
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Dear Ms. Darm:

This letter is written by the Save Our Wild Salmon ("SOS") coalition and its undersigned member organizations in order to comment on the draft "Biological Opinion for the Operation of the Federal Columbia River Power System Including the Juvenile Fish Transportation Program and the Bureau of Reclamation's 31 Projects, Including the Entire Columbia Basin Project," ("Draft BiOp" or "BiOp") prepared by the National Marine Fisheries Service ("NMFS") and released to the public July 27, 2000.<sup>1</sup> The Draft BiOp analyzes actions to be taken by the U.S. Army Corps of Engineers, Bonneville Power Administration, and Bureau of Reclamation, for these projects for compliance with the Endangered Species Act ("ESA").<sup>2</sup>

[www.removedams.org](http://www.removedams.org)

<sup>1</sup> NMFS emphasizes that the Federal Caucus/All-H Paper, referenced throughout the BiOp, is not a decision document. However, because the All-H Paper is incorporated by reference at various points in the BiOp, however, SOS's comments necessarily address some of our concerns with that document as well.

<sup>2</sup> NMFS has recently released "revised" tables and analyses purportedly based on a new CRI analysis issued September 5, 2000. Because these analyses were made available just one week before the comment period closed, SOS reserves the right to submit additional comments on these new analyses, and incorporates those comments by reference in the comments we submit today

With a combined individual membership of 6,000,000, SOS is a coalition of more than 50 sport fishing, commercial fishing, and conservation organizations - local, regional, and national -which seek restoration of salmon stocks throughout the Pacific Northwest to sustainably harvestable numbers. SOS appreciates this opportunity to comment on NMFS' Draft BiOp.

After a brief introductory statement and general remarks concerning the structure and legal requirements of the Draft BiOp, these comments will discuss specific vulnerabilities relating to the Reasonable and Prudent Alternative set forth, the science employed, and the legal omissions and missteps in this BiOp. Although there is significant overlap between the various shortcomings in the BiOp, where possible, we attempt to match our comments with the corresponding sections of the BiOp.

## INTRODUCTION

Overall, SOS finds the Draft BiOp woefully inadequate, crying out for major revision in the final version. While SOS believes that a scientifically and legally defensible Biological Opinion could be crafted around the framework of this draft, the draft as currently written is unacceptable: Meeting neither the requirements of science nor law

SOS does agree with NMFS that the proposed action is jeopardizing the continued existence listed, salmonid species in Columbia River Basin. We are pleased that the agency, under great pressure to do otherwise, correctly followed the science in this regard and called jeopardy on the current federal Columbia River hydro system. However, we are greatly concerned that the agency's willingness to follow the science does not carry over to its Reasonable and Prudent Alternative ("RPA") to this action. Rather than following the only peer-reviewed analysis of what is necessary to protect listed Snake River salmon and steelhead from extinction -- namely dam removal<sup>3</sup> -- NMFS apparently bowed to political pressures. The result is the tortured RPAM included in this Draft BiOp. This RPA is neither reasonable nor prudent and it relies on actions far outside the action agencies' authority and control in an attempt to mitigate for the deleterious impacts of the federal hydro system on these species. The Draft BiOp's speculation about these measures fails to satisfy the ESA and more important, fails to provide for the biological needs of listed fish.

The science requires a wholly different approach to this BiOp and its RPA. Specifically, the science clearly illustrates that removal of the four lower Snake River dams is a necessary part of a larger strategy needed to protect and recover all species in the Columbia and Snake River Basin. That is, dam removal alone may not be a "silver bullet." However, the science plainly indicates that it is a necessary part of an overall strategy.

As such, the only biologically and legally defensible position for NMFS to take in a final BiOp is to call jeopardy on the federal hydro system and to require removal of the four lower Snake River dams in its RPA, with a possibility that dam removal need not be implemented if the action agencies can demonstrate, through clear and convincing objective evidence, that listed -salmon and steelhead in the Snake River meet recovery standards. Anything less is simply 'unjustified by both science and law.

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<sup>3</sup> "Dam removal" as used throughout this document is intended to refer only to the removal of the four federal lower Snake River dams.

At the same time, we recognize that even if the final BiOp does call for the necessary removal of the four lower Snake River dams, there will inevitably be some time between such a decision and the actual removal of the dams. SOS believes that this timeframe should be no more than five years. However, during this time, we believe that there are actions that should and must be begun, and in some cases completed, to assist salmon recovery in the Basin. We offer our comments below in that spirit. Simply put, SOS urges the agency to call for dam- removal of the four lower Snake River dams in the final BiOp and to put forth credible and additional habitat restoration and other efforts in the next five years that will assist Snake and Columbia River salmon in their recovery.- The science requires nothing less.

Our specific concerns with the Draft BiOp's scientific and legal inadequacies are discussed below. However, we begin with several general concerns regarding the BiOp's structure, and a discussion of problems that appear throughout the BiOp.

## **1. GENERAL COMMENTS**

### **A. STRUCTURE**

SOS has fundamental concerns with the current structure of this draft BiOp. As written, the BiOp contains a wait-and-see approach to whether removal of the four lower Snake River dams is necessary for salmon recovery. This "on-ramp" approach to dam removal is unacceptable; placing the burden of proof and the risk on the listed Snake River salmon and steelhead. Given the status of the listed salmonids, these fish do not have time to wait any longer. We strongly urge the agency to a an "off-ramp" approach to dam removal instead.

An "off-ramp" approach follows the best available science and recognizes dam removal as a necessary part of a larger strategy for salmon recovery in the Basin. However, in the short-term between the release of the final BiOp and the actual removal of the dams, the agency would require additional habitat measures that are necessary for salmon recovery and would assist salmon in the Basin. Thus, while final studies and analyses on dam removal are completed by the action agencies, additional salmonid habitat restoration would continue to take place. If, prior to physical dam removal activities taking place, NMFS can demonstrate with clear and convincing evidence that Snake River salmon and steelhead are firmly on the path of recovery then the agency could reassess the need for dam removal at that time.

This approach puts the emphasis and burden on the action agencies to prove that dam removal is no longer necessary to recover the species. At the same time, this approach gives the region time to prove that it can indeed take the difficult steps that will be necessary to recover these fish without dam removal. In the past, the region has been unwilling or unable to step up to the plate to make the difficult choices necessary to recover salmon in the Basin. This country passed an Endangered Species Act to ensure that these tough decisions would be made.

SOS urges the agency to adopt this approach. Our comments below are offered in the spirit that NMFS will adopt an off-ramp approach and are set forth to improve salmon survival in the short-

term period between the release of the final BiOp and physical dam removal. They should not be taken in any way to mean that SOS endorses the current "on-ramp" approach set out in the draft BiOp.

## **B. LEGAL ISSUES**

### **1. The ESA Requires That The Risk Associated With The Actions Must Be Borne By The Action, Not The Species.**

The Endangered Species Act, 16 U.S.C. § 1531 *et seq.*, is the "most comprehensive legislation for the preservation of endangered species ever enacted by any nation." *TVA v. Hill*, 437 U.S. 153, 180 (1978). "[T]he language, history, and structure of the legislation ... indicate[] beyond a doubt that Congress intended endangered species to be afforded the highest of priorities." *TVA*, 437 U.S. at 174.

Section 7 of the ESA requires federal agencies to "insure that any action authorized, funded., or carried out by such agency ... is not likely to jeopardize the continued existence of any endangered or threatened species." 16 U.S.C. § 1536(a)(2) (emphasis added). Agencies are required to use "all methods and procedures which are necessary," 16 U.S.C. § 1532(2), to "*prevent* the loss of any endangered species, regardless of the cost." *TVA*, 437 U.S. at 188, n. 34. As the Supreme Court recognized, "Congress has spoken in the plainest of terms, making it abundantly clear that the balance has been struck in favor of affording endangered species the highest of priorities, thereby adopting a policy which it described as 'institutionalized caution.'" *TVA*, 437 U.S. at 194. The ESA's policy of "institutionalized caution" requires that [t]he risk [presented by an action] must be borne by the project, not by the endangered species... Congress clearly intended t4at [federal agencies] give the 'the highest of priorities' and the \*benefit of the doubt' to preserving endangered species. *Sierra Club v. Marsh*, 816 F.2d 1376, 138,6 (9<sup>th</sup> Cir. 1986) (citations omitted)(emphasis added).

Adhering to the ESA's cautionary approach would go a long way toward fixing many of the problems we identify in our specific comments below.

### **2. The BiOp Fails To Utilize The Best Scientific And Commercial Data Available.**

Nowhere is the requirement that NMFS err on the side of caution more clear than in the requirement that NMFS base its decisions on "the best scientific and commercial data available.", See 16 U.S.C. § 1536(a)(2) (agency must use "best scientific and commercial data available" to ensure actions will not cause jeopardy). Indeed, the difference between the concept of scientific certainty and the "best ... data available" is critical. Congress' goal was to protect species faced with imminent or threatened extinction, and thus, it placed a premium on prompt action, requiring agencies act based not upon "scientific certainty," which could take years to develop, but upon the "best ... data available." For example, in *Defenders of Wildlife v. Babbitt*, 958 F. Supp. 670 (D.C. Cir. 1997), the court rejected the U.S. Fish and Wildlife Service's use of "scientific certainty" as the standard for its decision not to list lynx as threatened species. The Court held that "the clear intent and purpose of Congress in enacting the ESA was to provide preventative protection for species before there is 'conclusive evidence' that they hve become extinct." *Id.* at 68 1.

The Draft BiOp toggles between utilizing the "best ... data available" standard and scientific certainty. For example, NMFS asserts that it is not prepared to require dam removal because of "uncertainty," see p. 9-192, while simultaneously asserting that the RPA "should" work, admitting that there is substantial uncertainty about whether the RPA can avoid jeopardy. See, e.g., p. 8-2 (required "additional survival improvement may result from ... [measures described in] the All-H paper") (emphasis added). The ESA's precautionary approach demands that if NMFS is going to take a chance, it must choose an option that will do the most to protect listed species, not one designed to cause the least disruption to the status quo.

## **II. SPECIFIC COMMENTS**

### **A. THE "NO JEOPARDY" DETERMINATION FOR REASONABLE AND PRUDENT ALTERNATIVE SUGGESTED IN THE DRAFT BiOp IS INAPPROPRIATELY BASED ON SPECULATIVE MEASURES OUTSIDE THE ACTION AGENCIES' CONTROL.**

By NMFS' own admission, the Reasonable and Prudent Alternative ("RPA") for the action agencies set forth in this draft Biological Opinion will not, by itself, avoid jeopardy. (pp. 9-1, 9-16, 9-191, 9-220). Instead, the Draft BiOp relies on unproven benefits from speculative measures outside the hydro system - many of which are outside the control of the action agencies - to conclude that its RPA, together with the measures outlined for nonconsulting entities in the All-H paper will avoid jeopardy. Indeed, at almost every turn, the BiOp minimizes the changes necessary from the hydro system to meet survival and recovery standards. The fundamental problem seems to be rooted in NMFS' bet that everything other than the hydro system will compensate for the hydro system's constant attack on these listed species. Rather than burdening the action agencies and the hydro system with the responsibility for survival and recovery, the Draft BiOp merely requires the action agencies to continue operating the hydro system in the same manner that has proven ineffective over the past five years, with little in the way of improvement. The Draft BiOp proposes to make up for the shortfall through measures outside the hydro system. The ESA, however, simply does not allow NMFS to shift the burden from the Action Agencies.

#### **1. The RPA Must Require More From the Hydro System.**

It is clear that the Draft BiOp falls far short of requiring all that it can from the action agencies in the hydro system. Although the Draft BiOp has been touted as an "aggressive non-breach" approach, upon inspection, it becomes readily apparent that the promised "aggressive" recovery actions are not there. Instead, the Draft BiOp sets forth laudable objectives, promises tough performance standards (to be developed at a later date), and then sets forth a list of RPA actions that consist mostly of studies, pilot projects, and planning processes. Remarkably, the hydro system measures are essentially the same as those set forth in the 1995 BiOp, with no hard flow requirements, no new water acquisitions, and a continued reliance on barging and trucking, practices that have been roundly and deservedly criticized by the region's scientific community. Even NMFS acknowledges this point in the draft when it writes that "RPA continues many of the 1995 Biological Opinion and 1998 and 2000 Supplemental Biological Opinion measures." (1p. 9-35)

The point is most clearly illustrated, perhaps, in tables 9.7-2 and 9.7-5 where a comparison between the status quo and the RPA shows very minor improvements in survival levels. Table 9.7-2 shows almost no change in adult survival per project. Table 9.7-5 shows a similar result for juvenile and adult survival through the whole FCRPS. But most shocking is the realization in table 9.7-5 that the RPA might actually be worse for Snake River sockeye.

An equally disturbing discussion is found in the draft BiOp's discussion of flow targets. First, the flow targets are the same as those set in the current base case (i.e., they are taken from the 105/1998 B10p). Second, the flow levels are again merely targets not "hard constraints." Thus although higher flows are essential for salmonid recovery in the Basin, NMFS has once again put the hydro system above salmon recovery by setting these targets to preserve hydro system needs, rather than to protect salmon and steelhead. For example, NMFS specifically states that optimal flow levels at the Lower Granite Dam for summer migrants would be in the range of 80-100 KCFs (p. 9-40). Nevertheless, NMFS set summer flow targets at levels that are almost half these optimal levels. NMFS' reason for doing so is far from scientific. Rather, NMFS states that it retained these low levels because it determined that higher "flows could seldom be achieved" (p. 9-40)

Where the draft BiOp does add elements to the measures proposed in 1995, it adds only plans for more plans. Rather than requiring immediate action, the draft BiOp often calls for additional research or planning. RPA measures include: a two-year study by the Bureau of Reclamation to determine the extent of unauthorized water use in the basin (p. 9-51); negotiations with Idaho stakeholders to determine "additional state law mechanisms" to increase flow augmentation supplies (p. 9-53); and a 5-year draft feasibility analysis by the Army Corps of potential changes in existing flood control operations to aid salmon (p. 9-55). These purportedly "aggressive" actions will not save one fish in the near term, and may never save any fish.

Our point is not that these steps are not worthy of pursuit. They are, but they are not "on the ground" remedial actions that will improve listed salmon, stocks - which is what the salmon and steelhead need to recover. There is a collection of other readily identifiable, aggressive options available to the action agencies that could alleviate the pressure on, listed stocks in the short term. These measures receive no consideration in the draft BiOp. Such measures could include, but are not limited to: a requirement that the action agencies use all authorities possible to meet flow targets, including modifying flood control operations, delivering water from BOR projects, and increasing spill; and decreasing reliance on barging and eliminating trucking.<sup>4</sup> For example, the

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<sup>4</sup> NMFS must not ignore the substantial evidence that trucking is a failed technology. For example in its "Response to Questions of the Implementation Team Regarding Juvenile Fish Transportation in the 1998 Season," the ISAB found that the "available information does not support taking the majority of emigrants of any stock into transportation. A spread the risk approach involving the use of barges, spill and other measures intended to enhance downstream passage survivals should be started each year as early as possible and continued as late as possible to protect the entire spectrum of the salmon and steelhead emigration." The ISAB recommended "that trucks not be used in the transportation program... Most historical information on truck transportation shows lesser survival benefits and more problems with homing than have been experienced with barge transportation." ISAB Report 98-2 (Feb. 27, 1998). There is no justification for continuing this destructive practice.

Bureau of Reclamation should be required to operate its upriver storage projects to provide sufficient water to meet the designated flow targets in the lower Snake River, as should the Corps at Dworshak, and BPA should be required to spill more water during the migration season in order to improve juvenile survival. Establishing a voluntary, pilot project water brokerage, as indicated in the draft BiOp, is simply not enough.

A's NMFS was directed in Idaho Fish & Game v. NMFS, 850 F. Supp. 866, 900 (D. Or. 1994), NMFS' responsibility, is to determine what is necessary for salmon survival and recovery in the Basin, NOT what the hydro system can withstand or most easily produce. Continuing to rely on actions that are admittedly insufficient to improve salmon survival through the hydro system fall to follow both the science and the law. This certainly is not the major overhaul Judge Marsh called for in Idaho Fish & Game, nor the major overhaul promised by NMFS and CEQ earlier this year. Instead it is simply the status quo; a status quo that - as NMFS recognizes with its jeopardy opinion - fails to protect or recover listed stocks. NMFS must require much more from the action agencies and the hydro system in its final BiOp.

## **2. Off-site Mitigation.**

As the past 5 years of operations pursuant to the 1995 BiOp have conclusively demonstrated, the stopgap "system improvements" required by the 1995 BiOp, and continued in this BiOp, will not avoid jeopardy. The Draft BiOp acknowledges this fact. See, ~&, Table 9.7-17. The hydro system has been - and under NMFS' proposed RPA will continue to be - the single greatest cause of Snake River salmon and steelhead mortality. In an attempt to compensate for this mortality, and to supplement the ineffective hydro system half steps continued in this RPA, the BiOp now cobbles together ' a mix of proposed measures in the "other H's," primarily tributary and estuary, habitat. This collection of speculative and hoped-for future "Offsite Mitigation" measures does nothing to change the inescapable fact that the hydro system cannot operate without jeopardizing listed Snake River salmon.

"Offsite mitigation" is comprised Of actions by both the action agencies and other federal, state, tribal, and private entities described in the All-H Paper. Throughout the RPA, NMFS refers to the expected benefits from the measures described in this document. As an initial matter, we note that the actions in the All-H paper are not "mandatory," and we question whether they can be reasonably. expected to occur. By NMFS' own admission, the All-H paper is "not a decision document. Its content is neither regulatory, nor binding in nature." p. 2-8. See also Id. at 9-1, n 1, (emphasizing that the All-H paper is a "conceptual recovery plan that NMFS intends to use as a ~4uideline for evaluating actions that affect the listed 19 cies.11i"hasis added).

SOS agrees that some of the proposed "offsite mitigation" measures may be necessary and could aid the survival and recovery of sustainable, harvestable populations of salmon in the Columbia Basin. Those measures should be implemented as soon as possible, regardless of what action is required to impTove survival through the hydro system. NMFS' conclusion that these measures are sufficient to ensure that the hydro system will not jeopardize listed Snake River salmon and steelhead stocks, however, ignores a mountain of scientific evidence to the contrary and violates the ESA. As long as the four lower Snake River dams remain in place, not even the highly speculative "best-case" assumptions that NMFS makes about the effectiveness of its offsite migration will stop the Snake River species, extinction spiral.

**a. NMFS' Consideration Of "Offsite Mitigation" Measures by Non-Action Agencies Violates The ESA.**

NMFS candidly admits that its RPA expressly relies upon measures to be taken by entities that are not involved in this consultation to mitigate the impacts of the hydro system down to a level that will not cause jeopardy. See p. 9-16 ("In combination with aggressive efforts to reduce hydro mortality, improvements expected from other ongoing Federal actions, and the cumulative effects of state or private activities that are reasonably certain to occur, these actions should be sufficient to allow the FCRPS and BOR operations to meet the jeopardy standard."). See also p. 9-1 (RPA "identifies actions that, when combined with other ongoing and anticipated measures in the Columbia Basin outlined in the All-H Paper," are likely to avoid jeopardy); 9-220 (same) That the BiOp relies upon the speculative actions of non-consulting agencies is highlighted by the fact that the action agencies cannot possibly implement many of these offsite measures. The FCRPS action agencies cannot, for example, repair damaged stream habitat on Forest Service lands. NMFS' reliance on the benefits that may come from many of the measures described in the All-H Paper is undermined by the fact that many of these measures are slated for implementation by entities other than the action agencies. NMFS lacks authority to require nonconsulting agencies and/or other actors to carry out any of the measures prescribed in the RPA. Section 7 of the ESA requires NMFS to "suggest those reasonable and prudent alternatives which [it] believes would not violate subsection (a)(2) of this section and *can be taken by the Federal agency or applicant in implementing the agency action*" (emphasis added). 16 U.S.C. § 1536(b)(3)(A); see also Aluminum Company of America v. Bonneville Power Administration, 175 F. 3d 1156, 1159 (9th Cir. 1999) (defining RPA as measures that NMFS "believes would not violate section 7(a)(2) and *that can be implemented by the action agency*") (emphasis added). Thus, without the authority to require non-consulting entities to implement other measures through the RPA, NMFS cannot assume that they will occur, nor can it rely upon them to conclude that the action it is analyzing will avoid jeopardy.

**b. NMFS' Reliance On Offsite Mitigation Measures From The Action Agencies, Is Similarly Misplaced.**

The Draft BiOp's analysis of offsite mitigation measures by the action agencies is similarly flawed. Here, as with the RPA generally, NMFS relies on measures outside the action agencies control. The Draft BiOp fails to demonstrate that such measures either will occur or will be effective.

Many of the offsite mitigation measures described by the action agencies involve making funding available to a number of state, tribal, or private entities to take actions presumed to benefit listed fish. These entities, however, are not subject to NMFS' authority through this BiOp. Thus, relying on third parties to implement measures to mitigate for the effects of the action subject to consultation suffers from the same deficiency described above: NMFS may not rely on the speculative actions of entities other than the action agencies to conclude that its RPA avoids jeopardy. For example, while assuming that the benefits will accrue from such actions, the draft BiOp does not identify any commitments by the States to improve flows in dewatered tributaries where listed stocks spawn. Instead, it assumes that such measures will be implemented because of the performance standards that will be set. (p. 9-220). Performance standards are not actions however, and the Action Agencies have no authority to "ensure implementation of off-site mitigation" through performance standards, as stated in the Draft 13101

Moreover, many of the offsite mitigation actions outlined in the RPA emphasize additional studies, goals, and planning rather than on-the-ground action. For example, NMFS relies on, improvements from the implementation of the Mid-Columbia HCP. 'The BiOp's reliance is misplaced for at least three reasons. First, it is far from obvious that the Mid-Columbia HCP Will provide any additional benefits to fish in the region. As matters currently stand, Chelan PUD believes it is meeting the HCP's requirements with little to no changes at their facilities. Little to no change does improvement make. Second, it is also far from obvious whether the HCP will ever be finalized. Key signatories to the agreement, namely tribal representatives, have yet to agree to the requirements in the HCP. Furthermore, it is unclear whether the HCP even meets the tests of law or science. Even if the HCP is finalized, as currently written it is in danger of violating various environmental and natural resource laws. NMFS' reliance on such actions is misguided and places undue risk of failure on the RPA and thus, on the listed species.

As courts have held, NMFS cannot rely on speculative future actions that may or may not occur when making decisions under the ESA. For example, in *Oregon Natural Resources Council v. Daley*, 6 F. Supp.2d 1139 (D.Or. 1998), the court rejected NMFS' attempt to avoid listing Oregon Coast coho salmon by relying upon uncertain and voluntary future conservation measures. Here, as there, NMFS is relying upon uncertain and voluntary future measures. The ESA simply does not allow NMFS to place the burden created by this risk of failure on the listed species.

### **3. NMFS Has Not Demonstrated That The RPA, Coupled With The Offsite Mitigation Measures Can Prevent Jeopardy.**

Even after considering all of the measures described in the All-H paper, NMFS is still unable to conclude that its RPA provides the protection necessary to avoid jeopardy. Indeed, NMFS , admits that, under the worst-case scenario, the RPA, coupled with offsite mitigation, will avoid jeopardy only for some of the index stocks (and by proxy, the ESUs they form) and ESUs for which NMFS has qualitative data. (pp. 9-189 to 191). See table 9.7-17. See also 9-16 ("In combination with aggressive efforts to reduce hydro mortality, improvements expected from other ongoing Federal actions, and the cumulative effects of state or private activities that are reasonably certain to occur, these actions should be sufficient to allow the FCRPS and BOR operations to meet the jeopardy standard.") (emphasis added).

More important, there is no guarantee that the offsite mitigation measures described in the Draft BiOp and the All-H paper, even if fully implemented, will provide the benefits that NMFS assumes. The BiOp does not contain any technical analysis establishing the feasibility of achieving the additional survival benefits needed beyond those provided by the RPA through implementation of the All-H Paper actions. Indeed, NMFS' own scientists have stated that quantitative links between habitat and hatchery measures and salmon productivity have not been defined (CRI, 7/17 draft at p. 99), clearly revealing the speculative nature of NMFS' optimistic "no jeopardy" conclusion. NMFS cannot rely on the conclusory, self-serving statement in the Draft BiOp that the All-H Paper measures "are considered feasible for achieving survival and reco of Columbia basin ESUs (p. 9-220)," to establish their feasibility. To meet the ESA's

jeopardy standard, the final BiOp must include recovery actions in its RPA and demonstrate -with scientific evidence - that they will achieve the goals required to avoid jeopardy."<sup>5</sup>

Moreover, even assuming that all of the offsite mitigation measures can be implemented, they will take a substantial amount of time to demonstrate what, if any, benefit they may have for listed-species. See p. 9-191 (NMFS' admission that these "actions will not produce immediate biological effects" and that "[t]he estimate for risk would be higher if a schedule for attainment of biological benefits were included."). This timeline could be longer than 10 years. As NMFS has noted, the hydro system is jeopardizing many of Snake River runs now and will continue to do so if NMFS pursues non-breaching measures. The draft BiOp provides no explanation for how imperiled salmon will make it through the "bottleneck" created by the time it takes to implement these actions and the point at which the benefits, if any, are realized. This is a significant factor that the final BiOp must evaluate. Waiting 10 years, hoping for speculative measures to produce scientifically untested-and unproven benefits while listed species continue to slide toward extirpation is scientifically indefensible and, more importantly, contravenes the ESA's mandate.

The measures proposed in the RPA, complemented by the off-site mitigation measures, are particularly inadequate to satisfy the jeopardy standard for critically endangered Snake River sockeye. In fact, the draft R-PA continues measures that affirmatively harm these fish. The best available science indicates clearly that Snake River sockeye respond particularly poorly to transport. Rather than propose any measures to alleviate these effects, the Draft BiOp does nothing more than continue the harmful effects of the status quo. In its continued emphasis on transportation, NMFS fails to account for the unique sensitivities of sockeye, lumping them together with other species in its transportation program. This is symptomatic of the larger problem created by transporting listed fish around the four Lower Snake River projects. The one-size-fits-all approach to transportation continued in this RPA will continue to select for certain species and certain stocks that tolerate transport better than others. The ISG emphasized this fact in its "Return to the River" report, but NMFS has not addressed this in the Draft BiOp.

For its part, the offsite mitigation proposed in the Draft BiOp will be similarly ineffective and, to the extent it draws resources from dealing with the problems created by the hydro system, may be affirmatively harmful to this species. Harvest measures will have no impact on this ESU because there is no harvest on Snake River sockeye. Similarly, measures to improve habitat or hatchery operations will do nothing to aid this species. All of the signs for the decline of these species point toward the hydro system. Sockeye numbers have plummeted in almost linear fashion after the construction of the lower Snake River dams. The BiOp admits as much, stating that the "FCRPS is a significant factor," in the continued extinction spiral of this species. Indeed, the BiOp is at a loss to detail any other factor. Despite claiming that there are "other factors" affecting this species' high risk of extinction, the BiOp is silent. See pp. 6-101 to 102.

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<sup>5</sup> NMFS' optimistic evaluation of offsite mitigation determined even further by its failure to examine actions that may offset any improvements that may result from these measures. While the ESA requires NMFS to consider the cumulative impacts of all reasonably future state and private actions, only the positive actions are factored into this RPA. Nowhere does NMFS consider the harmful actions that are equally likely to occur in the Columbia Basin. See *infra* at Section II.E, p. 16-17.

(citing others sections of the BiOp that contain nothing about additional causes for sock-eye mortality).

NMFS apparently believes that it need not address what is necessary to meet the jeopardy standard for sockeye because there is a lack of empirical information about the effects of the hydro system on this stock. (p.9-215). Ironically, the lack of quantitative information is due to the fact that not enough sockeye return upon which to conduct robust statistical analysis. In other words, it is precisely because sockeye have been so severely devastated that their recovery has not been given much attention.

NMFS is obligated to use the best available scientific information to determine whether the proposed RPA and is sufficient to avoid jeopardy for this ESU, even if there is not extensive quantitative data available. What we do know is that sockeye are in the worst shape of all Snake stocks. We also know through studies that sockeye experience higher rates of descaling when passing through bypass systems at the dams, which makes them more vulnerable to disease. Yet this issue not addressed. The final BiOp must include a much more thorough analysis of the hydrosystem's effect on sockeye using the best available scientific information. This analysis will need to be substantially qualitative given the lack of empirical data, but it can and must be done.

All that NMFS can offer Snake River sockeye in this Draft BiOp is the captive breeding program, which provides only "some assurance that Snake River sockeye Will not go extinct in the near future." (p.6-102). As NMFS is no doubt well aware, avoiding jeopardy means that an action must not impair the survival or recovery of a listed species. "Some assurances" that the species will not disappear falls far short of this requirement. On its face, this RPA simply cannot ensure that Snake River sockeye will avoid jeopardy.

The court's holding in Oregon Natural Resources Council v. Daley is no less relevant here: "[t]he wait and see stance of the NMFS has no support in the ESA or case law. Instead of placing the risk of failure on the future and voluntary 'conservation measures proposed by the OCSRI, the NMFS unlawfully placed the risk of failure squarely on the species." 6 F. Supp.2d 1139 at 1161 (D.Or. 1998). Neither the ESA nor the courts allow the wait-and-see approach that the draft BiOp embraces here. NMFS' final BiOp must reverse this lopsided approach to risk and embrace a dam removal "off-ramp" approach for Snake River stocks.

**B. THE DRAFT BIOP FAILS TO ESTABLISH A TIMELINE FOR DECISIONS REGARDING DAM REMOVAL THAT IS CONSISTENT WITH THE WELL-DOCUMENTED NEEDS OF SNAKE RIVER STOCKS.**

The scientific analysis of the listed stocks varies greatly based on availability of data and the time of listing. Thus, it is understandable, albeit unfortunate, that our scientific understanding of what is needed to protect and recover certain stocks is limited. That is not the case, however, for most of the Snake River stocks which, except for steelhead, have been listed since the early 1990s. Though some uncertainties remain, there is in fact enough certainty regarding the status of most Snake River stocks and the likely efficacy of potential remedial measures to set a recovery course. For Snake River stocks, that course must include a commitment to completing all preparatory work for dam removal no later than 2005 and a requirement that the action

agencies seek immediate appropriations and authorization from Congress by 2003. Again, we do not believe that such authorization is necessary. However, if there is indeed any question, this should be resolved as early in the process as possible to allow the framework of an off-ramp BiOp to work effectively and efficiently to protect salmon runs in the Basin.

That is not currently the case in the ' Draft BiOp. Though it calls for some (but not enough) preparatory work on dam removal to be completed by 2005, the Draft BiOp does not require the action agencies to seek congressional authorization for dam removal until year 8, and only if lambdas are below a specified level.

This is, inappropriate for several reasons. First, NMFS' own analysis shows that Snake River spring/summer Chinook are at high risk of extinction in the short-term. Based on the Army Corps' overly conservative estimates, there will be at least 6 years once dam removal is triggered before any dams could be removed, the soonest the dams would be removed is roughly 14 years from now. It would then take a few more years for the biological benefits of dam removal to materialize. Given the high risk of extinction in the short-term, that much delay is simply, unacceptable. (As we discuss later, see infra at Section II.D.2, p. 15, NMFS fails to factor into its analysis the increased risk of delayed implementation). The best available scientific information, including both the PATH and CRI analyses, reveal that dam removal is likely necessary to meet the "survival" prong of the jeopardy standard, almost certainly necessary -to meet "recovery" criteria, and that no other suite of actions short of dam removal will be sufficient.

Second, lambdas, alone, are inadequate to determine whether "recovery" of Snake River stocks is possible. Stock-specific abundance, diversity, spatial distribution, and productivity must also be taken into account. It is highly likely that Snake River stocks will not meet the "recovery" criteria without dam removal when these criteria are finally developed. This determination can be made at the year-3 evaluation.

The final BiOp should require completion of all preparatory work necessary for dam removal within the authorities of the action agencies no later than year five. This should include a requirement that the Corps complete its final engineering and design work and be prepared to begin earth-moving activities by 2005, not just preliminary analysis as the Draft BiOp currently provides. The final BiOp could also include a decision time to reevaluate whether dam removal is necessary for salmon recovery at the year five review if: (1) the "recovery" criteria for any Snake River stock can be shown to be met without dam removal; (2) lambdas and other measurements for Snake River stocks clearly evidence that populations are growing at a high, rate well-beyond that needed to meet survival standards and clearly sufficient to ensure recovery within a reasonable timeframe; and (3) physical and programmatic standards have been met all three elements are met, NMFS could chose to move off the dam removal path.

## **C. JEOPARDYSTANDARD**

### **1. The "survival" standard is flawed.**

While we appreciate the difficulty of determining appropriate stock-specific survival and recovery criteria, they are absolutely essential to determining the necessary constraints on the proposed action and additional mitigation measures needed to avoid jeopardy. The survival

standard used by NMFS - 5% probability of absolute extinction with 100 years (defined as one fish per generation) - may be "relevant" as NMFS suggests (p. I -10), but it is not biologically sound.

It is well documented that populations become functionally extinct at higher population levels, due to factors such as lack of genetic diversity. (Wainright and Waples, 1998; Myers et al. 1995) NMFS' reason for using an absolute extinction metric instead of a quasi-extinction metric (namely, that it has the same "biological meaning" for every stock) is not sufficient to justify its use. The key question is at what abundance will listed ESUs become functionally extinct. Even if it is not possible to identify a specific, functional extinction threshold for every population and ESU, the answer is clearly greater than one fish per generation. Thus, NMFS must either identify specific functional extinction metrics for each population, or, at a minimum, factor into its survival analysis an appropriate level of conservatism to account for the fact that populations will have crossed the survival threshold prior to the point of absolute extinction.

## **2. Recovery standards have not been set and "interim" recovery standards are inadequate.**

NMFS acknowledges that it has yet to determine specific "recovery" criteria for any of the listed stocks. (p. I -11). Instead, the Draft BiOp uses "best available, estimates of recovery abundance levels" for the five ESUs for which they are available, and relies exclusively on the "survival" standard for the other stocks. Of course, this severely compromises the draft BiOp, as there is no way to determine whether the RPA, coupled with the other proposed remedial measure's, are sufficient to achieve recovery. Consequently, at best the conclusions reached in the document regarding the adequacy of the RPA and other proposed measures must be deemed "interim" and subject to review and revision once the essential "recovery" metrics are established.

We find it particularly disturbing that recovery metrics have not been developed for Snake River sockeye and Chinook stocks that have been listed for nine and ten years, respectively. The final BiOp calls for completion of recovery metrics within three years. This is too long. Therefore NMFS must define the recovery metrics and the RPA and other proposed remedial measures must be evaluated against those metrics before the three-year check-in point,. so that needed adjustments can be made at that time.

## **D. SCIENTIFIC BASIS**

The draft BiOp has several fatal weaknesses in its scientific foundation. Those weaknesses include the failure to use the best available science and major flaws in the technical analyses conducted by CRI, which determine the level of improvement needed to avoid jeopardy. Several of these issues are addressed below. In addition, we will submit separately a detailed critique of the specific flaws in the CRI analysis. We note that the CRI analysis has been modified since the draft 1310p was issued. Significant changes were made in mid-September, which affect pivotal issues. These changes have made it impossible to provide the detailed technical comments at this time. We do, however, incorporate our forthcoming comments by reference here.

**1. The Draft BiOp fails to address the effect of lower Snake River dam removal on restoring Snake River fall Chinook spawning and rearing habitat, consequently understating the beneficial effects of dam removal for that stock.**

The Draft BiOp fails to address the enormous benefits of restoring a large amount of spawning habitat for Snake River fall Chinook if the four lower Snake River dams are removed. The Draft BiOp's conclusions regarding the likelihood of meeting the jeopardy standard for Snake River fall Chinook are based entirely on the projected improvements in migration survival through the hydro system and harvest restrictions. The addition of many miles of potentially high quality spawning habitat never enters the picture.

A statement in the All-H Paper deserves repeating here: "[n]one of the recommended habitat measures, nor any changes in operation of the FCRPS short of breaching, will result in significant increases in the basic productivity of fall Chinook." (All-H Paper at 45, emphasis added). Thus, there is no doubt that restoration of mainstem spawning habitat in the Snake River is essential to "recover" this stock.

There are essentially two options for restoring mainstem habitat: remove the, lower four Snake River dams; or (2) remove one or more of Idaho Power's Hells Canyon dams (or at least put in effective fish passage facilities and draw-down Brownlee reservoir to a natural river level). Of these two options, removal of the four lower Snake River dams was selected as the most promising by a panel of scientists convened as part of a study by the United States Geological Survey and Battelle Pacific Northwest Division. The USGS/Battelle report states that over half of the habitat currently inundated by the lower Snake River dams would be suitable for fall Chinook spawning. Battelle's Pacific Northwest Division, and USGS, Biological Resources Division, "An Assessment of The Impacts Of Development And Operation Of The Columbia River Hydroelectric System On Mainstem Riverine Process And Salmon Habitat, (June 2000). SOS incorporates this study by reference. Conversely, very limited fall Chinook spawning currently takes place in the constrained reach below Hells Canyon dam, which, according to the models used to identify potential spawning habitat, is unsuitable for spawning.

The mainstem habitat restoration measures identified in the All-H Paper (Vol. 2, p. 23); are wholly inadequate. They will do little, if anything, to address the fundamental problem: there is inadequate spawning habitat in the mainstem Snake River due to the four lower Snake River dams and the passage blockage at Idaho Power's Hells Canyon Complex.

The final BiOp must thoroughly address the benefit of lower Snake River dam removal with respect to fall Chinook spawning habitat and potential abundance. Specifically, the BiOp must describe how the RPA or other specific, feasible actions within the agencies' control will restore fall Chinook spawning and rearing habitat in the Snake River.

**2. The Draft BiOp violates a fundamental principle of species conservation -- erring on the side of caution in the face of uncertainty.**

Both effective conservation management and the ESA require a conservative, species-protection approach to ensure that management decisions made in the face of uncertainty do not place the species further at risk.<sup>6</sup> The state of Washington's statewide salmon recovery plan was recently criticized by an independent peer review panel for failing to heed that precautionary principle,<sup>7</sup> and NMFS appears headed down the same errant path with the Draft BiOp, by placing the risk of uncertainty squarely on the backs of listed stocks.

For example, NMFS concedes that it bases its finding that the RPA and other proposed actions are sufficient to avoid jeopardy on a "best case" scenario, in which the most favorable baseline data set is used, the highest possible survival improvements from the proposed actions are assumed; and the lowest estimate of adverse impacts from hatchery spawners is assumed. (p. 9-162). When the "worst case" scenario is used, the balance tips sharply in the other direction.

In addition, because even the RPA with these favorable assumptions still comes up short, NMFS speculates that the other measures identified in the All-H paper will make up the remaining gap, but offers no feasibility analysis supporting that speculation. (p. 9-220). Indeed, NMFS acknowledges that there is "uncertainty about the magnitude of the expected biological response to habitat actions ... and with the time frame for that biological response." (p. 9-4). Compounding that problem is the fact that, if "the time frame for that biological response" was included in the assessment, "[t]he estimate of the risk [to the species] would be higher." (p. 9-191). See also p. 6-105. Instead of taking a cautious approach to this uncertainty, NMFS opts for an RPA that is less risky for the hydro system and much more risky for the species. This decision places an unfair and inappropriate burden of risk on the species. In contrast, NMFS' own analysis shows that bypassing the lower Snake River dams is much more risk averse, and is likely to be sufficient alone for all Snake River stocks if there is significant hydro system-caused delayed mortality (p. 9-218, Table 9.7-27), a hypothesis strongly supported by PATH.

In the RPA, NMFS specifically states that "breaching the four lower Snake River dams would provide more certainty of long term survival and recovery than would other measures." p. 9-5. In fact, the BiOp shows that in the best case scenario, the breaching option meets all recovery and survival standards for all spring/summer chinook index stocks and fall chinook while the RPA only meets these standards for three of the seven spring/summer chinook index stocks. Compare pp. 9-163 and 9-171 with 9-205 and 9-209. Even assuming that the hydro system is not the cause of observed delayed mortality, the stocks are still much closer to meeting the requisite survival improvements under breaching than they are under the RPA. Nevertheless,

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<sup>6</sup> See Noss, R.F., M.A. O'Connell, and D.P. Murphy. The Science of Conservation Planning. (Island Press. Washington, D.C. 1997)

<sup>7</sup> Independent Science Panel. Review of "Statewide Strategy to Recover Salmon: Extinction is Not an Option." (2000).

NMFS chooses the RPA over the breach option due to "uncertainties" surrounding the delayed mortality associated with dam breaching. p. 9-4.

As discussed earlier, *supra* at Section I.B. 1, p. 4, when faced with uncertainty, the ESA requires NNIFS to err on the side of protecting the species. Where, as here, the weight of the scientific evidence clearly illustrates that such an action will avoid jeopardizing listed stocks, the ESA requires NNIFS to err on the side of protecting the species and act on it.

### **3. The BiOp fails to address and use the results of the PATH process.**

Though acknowledging PATH's finding that the hydro system is the likely cause of delayed mortality, NNIFS fails to meaningfully address that finding in its analysis. In particular, NMFS posits best and worst case analyses in its evaluation of the likely effects of dam bypass, but weights both equally. Through the extensive PATH analysis, including the Weight of the Evidence Report, it was determined that the hydro system is most likely the cause of the observed delayed mortality. NMFS gives no credence to this conclusion and substitutes its own judgment for that of PATH, without proffering any additional analysis showing that the PATH findings are flawed.

The final BiOp should state clearly that the PATH analysis indicates that the hydro system is the likely cause of observed delayed mortality of Snake, River stocks. NMFS must either offer evidence refuting that conclusion or meaningfully incorporate it into its analysis and selection recovery measures.

## **E. CUMULATIVE EFFECTS**

The ESA requires NNIFS to "evaluate the effects of the action and cumulative effects of the action." 50 C.F.R. § 402.14 (g)(3). The cumulative effects of the action include the "effects of future State or private activities, not involving federal activities, that are reasonably certain to occur within the action area."<sup>8</sup> 50 C.F.R. § 402.02.

The Draft BiOp's one-page analysis of cumulative effects falls far short of the analysis required by the ESA. NMFS must acknowledge and account for the fact that, at a minimum, some new activities will occur in the action area in the next ten years, and that many of these actions will adversely affect listed salmon and steelhead.

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<sup>8</sup> NMFS' regulations define the "action area" as "all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action .1; -50 C.F.R. § 404.02. NMFS' defines the action area here as the Columbia and Snake Rivers as well as any place outside the range of listed fish that "affect[s] natural runoff of water into those areas that are within the species range." p. 7-1 at n. 1. While SOS believes that this definition encompasses actions such as land management activities, we suggest that NMFS make clear that the action area encompasses all activities in watersheds that affect the Columbia and Snake Rivers, not just those activities that take place in the water.

For example, the Washington Department of Ecology is analyzing hundreds of new of new MW withdrawal permits in the Columbia River. See Helen Jung "In Water-Rights Dispute, State Agency Can Only Lose" The Mail Tribune, Medford, Oregon. <http://www.mailtribune.com/business/wsinw/wsj4.htm>. In addition, over 150 permits for Columbia River water (surface and groundwater in significant hydraulic continuity) are on file with the Washington Department of Ecology. This water is inchoate, i.e., a large portion of it has not been fully perfected. Thus, even without any further water use being permitted from the Columbia, the Columbia's current flows will continue to decline as permittees perfect their water rights.

Similarly, development, logging, and agricultural activities on state and private land will certainly occur in the very near term. These actions affect both the quality and quantity of water and have cumulative impacts on salmon survival. To be fair and to satisfy the ESA's cumulative effects standard, NMFS must assume that other actions, aside from those that it analyzes in the BiOp will impact listed salmon and steelhead stocks. While some of these cumulative effects may be geographically diffuse, they are certainly "reasonably foreseeable."

The Draft BiOp's failure to account for the negative effects of such actions only adds to the uncertainty that plagues the R-PA, which considers only the potentially beneficial actions from "Offsite Mitigation." See p. 9-16 ("In combination with aggressive efforts to reduce hydro mortality, improvements expected from other ongoing Federal actions, and the cumulative effects of state or private activities that are reasonably certain to occur, these actions should be sufficient to allow the FCRPS and BOR operations to meet the jeopardy standard") (emphasis added). In the RPA, NMFS repeatedly invokes the potential cumulative benefits that may accrue from future State and private activities in the action area without ever undertaking a full accounting of the negative effects of the myriad other State and private actions throughout the Columbia Basin. For example, in the All-H paper, NMFS highlights the benefits that may accrue from actions such as TMDL implementation, state recovery plans, and the Lower Columbia River Estuary Project. See, eg., All-H Paper, Vol. I at 8, 24, 64. Nowhere in the Draft BiOp is there any inventory or qualitative comparison between these potentially beneficial actions and the potentially detrimental actions discussed in the preceding paragraph.

SOS does not dispute that many of the measures discussed in the BiOp's offsite mitigation section may be beneficial to salmon recovery. However, when NMFS looks for "offsite" benefits in an attempt to mitigate the jeopardy caused by the hydro system, it cannot selectively consider only the positives. Looking at only the positive side of the ledger presents a lop-sided picture of the effects of the action to the public and inflates the already speculative benefits of offsite mitigation measures. The ESA demands that NMFS complete a comprehensive analysis that includes harmful actions occurring outside the hydro system. This analysis should include a qualitative comparison between the benefits assumed from the RPA and the adverse results from activities that can offset these improvements in the next ten years.

## **F. THE DRAFT PLAN VIOLATES THE CWA**

NMFS' discussion of water quality attainment in the draft BiOp suggests that the agency does not understand the requirements of the Clean Water Act (CWA). The CWA requires federal actions or permits to comply with state water quality standards. 33 U.S.C. § 1323. As a federal court has recently held, the Corps' dams are no exception to this rule. See National Wildlife

Fed'n v. U.S. Army Corps of Engineers, 02 F. Supp.2d 1072 (D. Or. 2000). A plan to develop a plan to comply with water quality standards at an unspecified time in the future, through indeterminate means, with indefinite commitments falls to meet the requirements of the CWA. See, eg., p. 9-30, 9-34. Moreover, EPA's recent letter to the Corps, dated July 31, 2000, makes clear that any "plan" for attainment of water quality standards is far from completion. In addition, as a result of this consultation, NMFS will issue an incidental take permit and incidental take statement, both of which require state certification under section 4.01 of the CWA.

Among other things, the final BiOp should specifically identify the actions required to comply with water quality standards, explain how these actions will achieve compliance and when compliance will occur. To the extent issues of cost, legal authority, or other matters are relevant to achieving compliance with water quality standards, these issues should be addressed directly and thoroughly. The draft BiOp's vague and inconclusive discussion of water quality standards simply continues, but does not correct, the legal defects that led to the court challenge in *National Wildlife Fed'n*. Indeed, we urge NMFS to review the Court's ruling in this case, the EPA letter of July 31, 2000, regarding water quality standards compliance, and the plaintiffs' memoranda and exhibits filed on July 21, 2000 (and subsequent filings) which further describe the failures to date to comply with the CWA and address these issues in the BiOp"

## **G. PERFORMANCE STANDARDS & REVIEWS**

### **1. Performance Standards**

SOS applauds the agency for developing a three-tiered approach to performance standards. Such standards could be useful to measure short-term survival improvements in the period leading up to dam removal. We are, however, deeply concerned that the draft's current standards are either too vague, too weak, or simply inadequate to provide listed salmonids with adequate protections.

For example, the concept of a programmatic performance standard is warranted. However, as set forth in section 9.2, the BiOp omits any specific description of what the agency intends such a standard to be. The draft merely states that this performance standard will exist. The draft does not state whether NMFS will consider the standard met by implementing one, ten, or all of the specific actions laid out in a given 1 -year or 5-year plan. Implementing all actions and funding requests should be required to satisfy this standard and NMFS should make this clear in a final BiOp.

SOS urges NMFS to develop physical performance standards for habitat. We understand the difficulty in developing these standards and urge the agency to move forward with this as quickly as possible. These standards are essential to provide the clear and convincing evidence that the agency would need to evaluate whether the species are recovering.

### **2. Midpoint Evaluations**

SOS strongly supports the agency's decision to require periodic evaluations to see if actions taken by the agencies are adequate to ensure the long-term survival of listed salmonids. However, SOS urges the agency to include a more rigorous 3-year evaluation as well as more serious consequences for failures to meet standards at all evaluations periods.

### **a. Three-Year Reviews**

SOS urges NMFS to include a 3-year evaluation that assesses the action agencies' progress to date. Such a check-in would require NMFS to determine whether the action agencies had implemented actions, completed studies, asked for and received authorization and appropriations for dam removal, and received necessary funding for future actions and studies. If the agencies failed to meet these obligations, serious consequences should be triggered, such as condemnation of water to meet mainstem and tributary flow requirements or further land and water use restrictions. Tough consequences such as these would provide incentive for the action agencies and the political powers that be to ensure the action agencies make progress toward recovering salmon within the first three years.

Additionally, in year three, NMFS should complete an assessment of whether the listed salmon in the Snake River will meet survival and recovery standards without lower Snake River dam removal. At that time, "recovery" standards will have been established for all Snake River stocks. If the agency finds that salmon recovery is not possible without dam removal, congressional authorization for dam removal should be sought immediately and all other dam removal activities should be accelerated.

NMFS must require more specific and stronger consequences for failing to achieve performance standards at year five. Requiring reinitiation of consultation at year five is simply just more planning. The salmonid populations at risk under this BiOp can ill afford nothing more than additional talking among the agencies. If Snake River stocks are not meeting the biological and physical performance standards by year five, as discussed above, the agencies should move forward immediately with dam removal.

### **b. Five-Year Review**

SOS must respond to critical components of the NMFS' plan for midpoint evaluations. First SOS urges NMFS to ensure that its "adequacy assessments" as discussed in section 9.4.1.2 are subject to peer review and public notice and comment, resulting in actual, enforceable decisions. Second, SOS urges NMFS to require the action agencies to seek pre-authorization of dam removal by year three. There is no rational reason to wait to seek this authorization at year five as suggested in figure 9.4.2. Waiting until year five to seek such authority could mean that dam removal is put off several more years - time that these species do not have. Even the 1995 BiOp required this pre-authorization. This BiOp cannot include less.

While there can be one and five-year reviews, the yardsticks need to be clearly defined programmatic standards. The consequences of failing to meet these standards need to consist of more than just additional planning.

### **c. One and Five - Year Plans**

SOS urges NMFS to provide public review and comment of the one and five-year plans. This is the only way to ensure adequate and fair public participation in this planning process

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### **3. Actions in the Event of a Failure Report**

SOS takes issue with NMFS' plan under a more-than-Snake-River-dam-removal scenario as discussed in section 9.4. NMFS states that if it finds that more than the four lower Snake River dams need to be removed to ensure the survival of the listed socks, then nothing will happen until there is further analysis and determination of which other dams need to be removed. Federal, State, and Tribal governments have spent the past five years and millions of dollars evaluating the four lower Snake River dams. Waiting to take action with respect to these projects until analyses of other hydro system projects are completed is arbitrary. Planning and necessary, preliminary actions to remove four Lower Snake dams should begin immediately. If NNIFS later determines a need to study other projects, additional analysis of those projects can continue at the same time as removal of the Lower Snake projects.

## **VI. INCIDENTAL TAKE STATEMENT**

The ESA permits issuance of an incidental take statement if either the proposed action does not jeopardize listed species or a reasonable and prudent alternative exists, which, by definition, would avoid jeopardy. 16 U.S.C. § 1536(b)(4). As discussed at length previously, the RPA in the draft Biological Opinion, as NMFS concedes, fails to avoid jeopardy. Under the best-case assumptions for Snake River spring/summer chinook only three of the seven index stocks meet the survival and interim recovery standards. (p. 9-162). Under a worst-case scenario, the RPA will avoid jeopardy for only one of the seven index stocks. For Snake River fall Chinook and steelhead, the RPA does not avoid jeopardy under either the best case or worst case scenario. (p. 9-171, 9-176). The RPA similarly comes up short for upper Columbia spring Chinook and steelhead stocks. (p. 9-168, 9-180).

Notwithstanding this fact, NMFS concludes that the jeopardy standard will be met through implementation of the RPA when coupled with other "off-site" mitigation actions outside the jurisdiction of the Action Agencies. (p. 9-219-925). For the reasons discussed above in the sections addressing the RPA and off-site mitigation, reliance on speculative future actions -outside the jurisdiction of the Action Agencies to avoid jeopardy is not permitted by the ESA~ the RPA itself must be sufficient to avoid jeopardy. Consequently, the necessary predicate for all incidental take statement has not been met (i.e., an RPA which avoids jeopardy). Without an effective RPA, NMFS simply cannot legally issue an Incidental Take Statement.

Finally, SOS is concerned that, when the amount of take permitted for many species of listed salmonids throughout the Columbia Basin is combined, NNIFS has authorized the take of well over one hundred percent of many listed ESUs. The BiOp must demonstrate that the levels of incidental take permitted in the BiOp, in conjunction with the cumulative take permitted throughout the basin, does not allow a level of take that exceeds the number of fish produced each year.

## **VII. ANALYSIS OF BREACHING ALTERNATIVE**

SOS commends the agency for including a section on a dam removal alternative. We believe that this is an important aspect of the overall analysis for what is necessary to protect and recover the listed salmon species at issue under this BiOp. This analysis, while biased against dam

removal (see comments below), still illustrates that a dam removal alternative will have a much greater chance at recovering and protecting the listed Snake River stocks than will the proposed RPA and off-site mitigation. In the best case scenario, all species meet all of the jeopardy standards. In the worse case scenario, fall chinook still meet every standard, steelhead only requires an additional 8% survival improvement, and the spring/summer chinook meet the standards for 5 of the 7 stocks (though Marsh Creek fails to meet the short-term recovery standard by 3%, but, does meet the long-term standard). What is perhaps the most surprising about these results is that they occur regardless of the inherent bias associated with this analysis

The BiOp's analysis of the dam removal option is replete with bias. While the RPA is given every chance to meet standards and is offered in a positive light, the dam removal alternative's benefits are strongly downplayed. This analysis completely ignores the benefits that dam removal has to offer to the other eight listed stocks in the Basin. The BiOp specifically states that dam removal will have no positive benefits for the species outside the Snake River Basin. This is false. Removing the four lower Snake River dams will improve water quality – both temperature and dissolved gas -- in the lower Snake River. These water quality issues are cumulative in nature. That is, as the water moves downstream into the Columbia River the temperature and dissolved gas problems caused by the lower Snake River dams persist and are exacerbated by downstream dams. By removing the four lower Snake River dams, water quality improvements will be seen throughout the system below those dams. NMFS' analysis simply ignores this important and relevant fact.

NMFS' bias can also be observed in the BiOp's discussion and treatment of delayed mortality. NMFS states that the largest question regarding the potential positive impacts of dam removal centers around whether and to what extent the hydro system imposes some level of delayed mortality on salmon. The best available science on the issue of the cause of observed delayed mortality in Snake River stocks was developed by PATH. After extensive analysis, the state, federal, tribal, and independent PATH scientists concluded that the hydro system was the most likely cause of delayed mortality. As you know, the PATH analysis was supported by a peer review. Yet, the draft BiOp implicitly rejects this conclusion and, instead, equally weights the hypothesis that the hydro system causes significant delayed mortality and the hypothesis that the hydro system causes no delayed mortality. (p. 9-203). This directly contradicts the PATH conclusions and other credible evidence that the hydro system causes delayed mortality. This issue is also discussed previously in our comments on NMFS' failure to use the best available

NMFS' analysis and assumptions about adult passage also bring the agency's analysis into wing breaching to be identical to survival question. NMFS assumes adult survival rates follow under the RPA and -off-site mitigation. Despite NMFS' rational as put forth in Appendix C, Annex I (see p. C-A 1 -7 to C-A I - 11) this flies in the face of common sense. NMFS' rational is mainly based on the fact that the agency believes its RPA will completely address both adult fallback issues and gas bubble disease. SOS takes issue with both assumptions. However, even 'assuming that these assumptions are accurate, NMFS' analysis completely ignores other major Issues associated, with adult survival and the dams. For example, the analysis does not address, adult survival issues associated with high temperatures caused by the dams. By omitting this type of discussion and analysis, the agency's continued and unfair bias against dam removal is highlighted.

Similarly, NMFS employs a double-standard in its treatment of empirical data when analyzing the RPA and off-site mitigation and dam removal. For, example, the agency rejects the PATI-1 conclusion that the hydro system is the likely cause of delayed mortality because it found insufficient empirical information to support that conclusion. (p. 9-216). In contrast, NMFS concludes without any empirical evidence that yet undefined or analyzed, speculative off-site mitigation measures, when coupled with the R-PA, will satisfy the jeopardy standard. The agency cannot have it both ways. This bias must be removed in the final BiOp and the PATH information must be given due weight.

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## **VIII. NMFS MUST EVALUATE THE IMPACTS FROM THE 31 PROJECTS OPERATED BY THE BUREAU OF RECLAMATION.**

While SOS commends NMFS for acknowledging that BOR's 31 projects "have hydrologic effects on the flows in the mainstems of the Columbia and Snake [R]ivers," we are deeply troubled by the agency's refusal to apportion the BOR projects' contribution to the current dire status of the listed salmon ESUs and to limit the scope of any effects analysis to only "the aggregate effects of all 31 BOR projects on streamflows." (pp. 1- 1, 1-3). In addition, NMFS acknowledges that activities authorized by BOR have effects on salmon outside of mere mainstem flow impacts, yet the agency seems satisfied with the vague assertion that these effects will be addressed, "as appropriate," in supplemental consultations with the BOR and not as part of this consultation. (p. 1-3). Therefore, with this consultation, NMFS clearly is once again refusing to sufficiently evaluate the total impacts of BOR's operations on the listed salmon ESUs.

This refusal to consult in any reasonable detail on BOR's activities in the Columbia River Basin is even more surprising and disappointing in light of NMFS' acknowledgment that "BOR-based irrigation activities are a major impediment to meeting NMFS' flow objectives." (p. 6-28). Moreover, the agency "attributes substantial streamflow depletion effects to BOR project operations." *Id.* Despite conceding these significant facts, NMFS proceeds to treat BOR-authorized water withdrawals as an inevitable part of the baseline flow conditions in the mainstem. See, ev.,... 9.6,1.2.4 (RPA that merely requires BOR to continue providing 427 kaf annually, while recognizing that natural and other conditions could make this impossible). In fact, in keeping with the rest of the actions mandated by the RPA, none of the RPA actions that implicate BOR require the agency to do anything that will result in more water in the Columbia River; rather, NMFS merely requests that BOR conduct several evaluations, submit reports, and pursue obtaining cooperative agreements. with water users and states. See pp. 9-50 through 9-54. Such vague and inconsequential RPA actions contribute nothing toward achieving the stated objectives of the BiOp, let alone satisfying- the ESA's requirements.

NMFS appears to rationalize its refusal to substantively address activities by stating that "any calculation of the frequency that the flow objectives would be 'achieved without these BOR-based irrigation activities is speculative," and that "it is not clear that BOR could, with any reasonable degree of certainty, avoid these effects [(impacts)]." (p. 628). SOS cannot comprehend how NMFS can characterize as "speculative" the potential contribution of between 6.5 to 13.5 Maf of water to the currently depleted flows of the Columbia River. (p. 6-28, note 3). Moreover, that BOR has the authority to modify or revoke any of the water withdrawal contracts that it issues certainly gives BOR the ability to avoid the effects attributed this irrigation. Consultation by NMFS and BOR on these contracts would finally ensure the BOR's activities do

not continue to significantly contribute to the decline of the imperiled salmon stocks in the Columbia River Basin.

Indeed, counsel for NMFS and BOR, in the context of the currently-pending case, Trout Unlimited v. NMFS, No. 00-262-MA (D. Or. Feb. 22, 2000), has specifically stated that all of BOR's individual contracts are subject to the consultation underlying this BiOp. NMFS has failed, however, to specify how these contracts-the water withdrawals authorized thereunder-are or are not reflected in the baseline for this consultation. Further, NMFS does not sufficiently describe whether the 427 kaf annual contribution from BOR projects is necessary to avoiding jeopardy. If the 427 kaf is not necessary, then the BiOp should explicitly say so. If it is necessary for avoiding jeopardy to the listed salmon ESUs, then in the context of the BOR contracts' being evaluated under this consultation, NMFS should require BOR to modify these contracts in a manner that will unconditionally secure BOR's annual provision of 427 kaf of water to, the river.

## CONCLUSION

In 1994, U.S. District Court Judge Malcolm Marsh warned that NMFS' then-current approach to protecting listed salmon stocks was "seriously 'significantly,' flawed because it is too heavily geared towards a status quo that has allowed all forms of river activity to proceed in a deficit situation - that is, relatively small steps, minor improvements and adjustments - when the situation literally cries out for a major overhaul." Idaho Dep't. of Fish and Game v. NMFS, 850 F.Supp. 866, 900 (D. Or. 1994). This BiOp is not that "major overhaul." In short, the Draft BiOp protects the status quo, not listed salmon. The ESA demands much more for the listed species than this draft offers and significant changes will be required to meet the ESA's standards. SOS looks forward to a final BiOp that addresses our concerns and the needs of Columbia and Snake River salmon populations.

Sincerely,

Pat Ford, Save Our Wild Salmon  
Rob Masonis, American Rivers  
Shawn Cantrell, Friends of the Earth  
Tim Stearns, National Wildlife Federation  
Bill Arthur, Sierra Club  
Sara Patton, NW Energy Coalition  
Jeff Curtis, Trout Unlimited  
Bill Sedivy, Idaho Rivers United  
Karen Garrison, Natural Resources Defense Council  
Glen Spain, Pacific Coast Federation of Fishermen's Associations & Institute for Fisheries Resources  
Liz Hamilton, Northwest Sportfishing Industry Association'  
Dan Rohlf, Northwest Environmental Defense Center